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AMPP NEWSLETTER

FEB 2020

A MESSAGE FROM STACY MCLAUGHLIN, DIVISION LEADER

I'm proud to introduce this quarter's AMPP Division newsletter, with a focus on "operational and process improvement." AMPP is known for excellence in our NNSA and DOE missions, as well as our operations that support those missions, but that does not mean that we can't be even better. This quarter's newsletter is devoted to how we are accomplishing the goal of improving not only what we do but how we do it.

2019 brought several group level management and organizational changes in AMPP Division. These changes were primarily undertaken with the mindset of improving our operations and becoming an even more efficient organization. AMPP started the fiscal year with four groups. Due to the shared flowsheet, customers and, resources between AMPP-1 and AMPP-2, which led to challenges for cross-organizational communication, it was determined to be more efficient to combine the two groups into one. **Jane Lloyd**, the previous Group Leader for AMPP-2, has graciously taken on the challenge for managing the combined AMPP-1 Group, Heat Source Technologies. **Jack Britt**, has taken on the role of Executive Advisor in the Division Office, with the primary focus of helping implement and facilitate our continuous improvement program. The revised Division structure is designed to align and streamline product flow. It will allow a Division level focus on Process Improvement Efforts, including Lean 6 Sigma Implementation, additional Human Performance Improvement (HPI) Focus, and development of continuous leadership development for our First Line Managers.

You may have also noticed your manager attending LANL's LOSA workshops. LOSA (Laboratory Operations Supervisors Academy) is comprised of intensive, interactive workshops for first-line managers with peers across the DOE complex. LOSA is founded on eight principles (see below). The ultimate goal is to shape a stronger performing, community based, inclusive working culture across LANL. In 2020 AMPP will be working on getting our emerging leaders to a LOSA workshop so that we can grow the culture of continuous operational safety improvement. Although there will be a limited cohort in 2020, if this is something you are interested in, please talk to your First Line Manager so that we can get you on the list for 2020 or upcoming years.

In closing, as we continue our work in calendar year 2020 and enter the second quarter of our fiscal year, I am eager to see our accomplishments in mission and operational excellence that make this organization such an essential part of the LANL mission as well as how we will continue to strive for even higher performance through process improvement.

To all of you, for all you have done in support of our vital national security mission, I want to express my sincere thanks and appreciation. Keep up the great work!

1. Everyone is personally responsible for ensuring safe operations.
2. Leaders value the safety legacy they create in their discipline.
3. Staff raise safety concerns because trust permeates the organization.
4. Cutting-edge science requires cutting edge safety.
5. A questioning attitude is cultivated.
6. Learning never stops.
7. Hazards are identified and evaluated for every task, every time.
8. A healthy respect is maintained for what can go wrong and what must go right

HSFA First Production Acceptance

A VIEW FROM THE HILL

by Brian J. Reardon, PhD
Scientific Advisor, LANL Intergovernmental Personnel Act (IPA) Assignment
Joint Chiefs of Staff, Strategy and Planning (J5), Strategic Defense and Nuclear Policy (SDNP)
The Pentagon

The vital role of Los Alamos National Laboratory's plutonium processing and production capabilities.

An aerial view of TA-55 at Los Alamos National Laboratory.

The role and importance of LANL's Plutonium (Pu) capability is a topic of discussion every day here in the Pentagon within the Joint Chiefs of Staff (JCS). In fact, on many walls you will see written the James Mattis' (former Secretary of Defense) August 2017 quote: **"The number one priority of the Department of Defense is that we maintain a safe, secure and effective nuclear deterrent so we make certain those weapons are never used."**

The importance of the nation's Pu capability, and thus LANL, then seeps into every response, plan, strategy, and policy issue faced by J5/StS, as viewed from where I sit. The J5, Strategy and Plans Division, sit on the Nuclear Weapons Council (NWC) and also manage international treaties for the Joint Staff. This office is involved with the Next Navy Warhead (NNW), the Ground based Strategic determent, the submarine launched cruise missile, the long-range stand-off weapon, CTBT, INF, new START, and NATO.

In all of these topics, **LANL's role in Pu production is a popular topic of conversation.** A typical day involves coordinating reports mandated by Congress on stockpile status, Presidential reports on future stockpile production requirements, and implementing the President's 2018 Nuclear Posture Review. In addition, the J5 provides feedback on future nuclear defense and platform research directions.

A big part of my day-to-day battle rhythm is attending meetings within the Pentagon to ensure that Joint Staff equities are being met, and attending meetings at the White House and other agencies to ensure international treaties, assets, and obligations are also being properly addressed. There is never a dull moment.

What is the JCS? The Chairman of the JCS (CJCS) is the principal military adviser to the President, Secretary of Defense, and the National Security Council (NSC). The JCS have no executive authority to command combatant forces. That authority runs from the President to the Secretary of Defense to the combatant commanders.

What is the NWC? The NWC is a joint DoD-DOE activity responsible for facilitating cooperation and coordination, reaching consensus, and establishing priorities between the two Departments as they fulfill their dual-agency responsibilities for U.S. nuclear weapons stockpile management. Membership to the NWC includes the NNSA Administrator, USD Acquisition, USD Research, USD Policy, Vice CJCS, and Commander USStratCom.

Every role that contributes to the U.S. nuclear weapons stockpile is a vital role in ensuring a safe, secure and effective nuclear deterrent, again, providing assistance to the certainty that we never have to use those weapons.

GLOVEBOX 251

The AMPP-1 Aqueous and Hydroxide team uses one of the oldest and largest gloveboxes in PF-4 for processing of HS-Pu.

The glovebox, which possesses seven stations, five of which consist of “double-deep” sets of gloves, was never initially intended to process HS-Pu, but has been the operational glove box for multiple missions.

There have been many upgrades and improvements performed over the years, but the glovebox has been showing its age, so more improvements were planned to reduce the risk to personnel and the room in which it is housed. The large overhaul project for this box included replacing four service panels, changing out three windows, replacing a leaking blank off plate, and converting 40 glove ports to CRLs. The glove conversion was a first-time evolution at LANL, and the process/procedure creation as well as the physical work fell on AMPP-1 to complete.

Through the determination of several teams involved, the project was successful in completing the requisite upgrades. The following were lessons learned and areas of improvement identified during this process:

- Procedures and personnel necessary to successfully complete the work should be identified early in project planning. Each task should be identified and its procedure should be tracked through generation to final approval.
- Ensure necessary parts are on hand prior to commencing work.
- For work inside a tent where airborne contamination has a reasonable expectation of being present, the work controls inside the tent should be carefully evaluated (e.g., CAM alarm set points).
- For the waste that is planned to be generated, NPI and CCP, along with the teams producing/removing the waste should be involved in the planning and scheduling phase. Additionally, the weight and shape of waste items should determine what extra support or protection the waste needs (e.g., protect sharp edges and pad heavy items).

Along with these lessons learned, the team identified multiple best practices that can be used to ensure success in future tasks:

- Create a new process or perform a first-time evolution; it is always a good idea to perform mockup evolutions. For CRL conversion, the team used the cold lab to design the process and train the workers. Additionally, they used this method for demonstrating the process to other involved organizations. Performing these mock evolutions effectively reduced their potential error rate by moving them from a skill-based mode (1:50) to a rule-based mode (1:1000).

- Assumptions are an error precursor that can cause lots of issues. Poor initial communications between the Project Manager and the other organizations resulted in many assumptions being made about the status of procedures and parts. After this was realized, the team set up regular meetings and created a checklist of action items and owners. As the job got closer, the team increased the frequency of these meetings. As a best practice, all items that need to be completed for a project should be captured in the project schedule and assigned an owner. This will serve as your checklist and metric for monitoring success.

CONTINUOUS IMPROVEMENT (CI)

What is CI and why is it important?

AMPP Division, through the use of a focus group and analysis of upcoming deliverables, has concluded that a commitment to continuous improvement is required to ensure future success. The ultimate goal of this process will be to help us accomplish our milestones/tasks in the most effective and efficient way while maintaining a stellar safety record. The purpose of this article is to shed some light on what that means to you.

First and foremost, it is essential to understand what continuous improvement is and how it will be addressed in AMPP division.

Continuous Improvement (CI) is an ongoing effort to improve products, processes, or services by reducing waste or increasing quality.

AMPP division has further defined continuous improvement by breaking it down into the following three subcategories:

Development – focusing on growing and sustaining the skills of the workforce.

Human Performance – focuses on tracking human performance in order to share lessons learned and target potential areas for employee development/training.

Process Improvement – focuses on making our processes more effective and efficient.

This outline provides an overview of the areas AMPP management is committed to supporting. Still, the success of the program relies heavily on consistent input from the entire team. The program will only succeed if there is a push from all levels of the organization to commit to change.

Q × A = I
Q = Quality of the solution
A = Acceptance of the people who must implement the solution
I = Impact of the solution

What to expect in the near future?

Development
A leadership development program is being created to support new and future leaders.

A continuing training program will start to provide training on various range of topics.

Some of the first requested topics are LANMAS/MC&A, MOV performance, KPIs, and 5s. Your input will be vital in identifying future topics.

A new mentor program is under development and will be available in CY20.

Human Performance
Beginning in November, we are distributing data and lessons learned from our Management observations and OPEX. The goal is to share lessons learned in a more efficient and timely manner.

We are capturing human performance data for the division. We will use this to create future actions to help us improve.

Process Improvement
Currently, we are performing an A3 analysis to improve the waste process in the Pu238 area. This issue was identified as a follow on action to a recent fact-finding.

We are requesting input from all teams to share any improvements they are making. This information will allow us to shine a light on our successes and possibly give us a chance to replicate your success.

The division office is committed to supporting and facilitating process improvement teams.

Your Role
Maintain a questioning attitude. Does it seem like there are too many steps to a process? Do you think there is a more efficient way to accomplish a task?

Talk to your coworkers and make suggestions for improvements.

Ask for help/assistance. Sometimes change can be daunting, and you will need support to accomplish it.

Make recommendations for improving and growing the CI program within AMPP.

The POC for the AMPP CI program is Jack Britt. Please forward him any recommendations for improvements/ changes to the program. Additionally, send him all requests for additions to the continuing training program.

EMPLOYEE SPOTLIGHT: DAVID MARTINEZ

David Martinez of AMPP-3 runs Direct Metal Oxidization (DMO) processes and the muffle furnace. He's worked at the Lab since 1989, starting in warehouse work in SM-30 and then at TA-55. In 1996, he made the transition to technical work and has been working in PF-4 ever since.

As a technician, he started off in roasting and blending, then moved into the experimental dissolver process, and later worked with discarding items from the vault. Now, with AMPP-3, he's actually back in the same room he started in, and says that not a lot has changed in the processes over the years. In fact, today he's working with the very furnaces that he and a coworker installed back in the 90s!

When David reflects on the work he's done and all the processes he's learned, some highlights that come to mind include burning metal and working with the muffle furnace. He enjoys the process of transforming metals and watching them change before your eyes.

David's advice for new employees is simple – get a degree. "I think schooling is very important for the younger generation. That's what I tell my two sons, who also work at the Lab. Education is very important for the newcomers." He also wants to encourage new employees to be patient as they adjust to all the new processes and planning involved with working in PF-4.

Outside of work, David spends the wintertime running a hunting guide business, which brings hunters from all over the world to experience the wilderness of Northern New Mexico. He spends his summer free time outdoors, too, enjoying camping, hiking, and fishing.

While a lot has changed in David's work over his years at the Lab, there's one thing that's stayed the same – the nickname listed as the official first name associated with his email address. The name hails all the way back to 1996 when his coworkers started calling him "The Carn", a play on the Spanish word "carnal," meaning "brother" or more specifically the Northern New Mexican "bro." A computer-savvy coworker made it his official Lab name, and it's stuck ever since.

LANL SERVICE ANNIVERSARIES

Larry Avens, AMPP-3 – 30 years
Bob Wingo, AMPP-4 – 20 years

WESST REPRESENTATIVES

Mario Romero, PT-1
IWESST Representative
Brian Valdez, NPI-8
IWESST Representative
Leonard Lujan, AMPP-3
Technician Chair
Marty Leal, AMPP-4
Communications Chair
Justin Hendricks, TA-55 OPS
Site Inspection
Amanda Martinez, ORI-2
WESST Chair
Clarissa Villareal, ORI-2
Lessons Learned
Gwen Gurule, ORI-3
Co-Chair
Adam Ramirez, MSS
Site Rep Alternate
Roberta Gonzales, MSS
Action Log
Stephanie Sedillo, MSS
Lessons Learned
Alonzo Simon, PAQ-2
Site Inspection Alternate

ARIES CELEBRATES 1 MT MILESTONE

On January 28, approximately 200 employees, LANL retirees, Defense Nuclear Nonproliferation (DNN) staff from Washington, D.C., and Lab leadership gathered in the National Security Sciences Building (NSSB) auditorium at TA-03. The celebration followed a day of touring for the DNN group, who saw the progress the ARIES team has made firsthand, and observed the unique processes that have made the program a continued success.

At the celebration, John Sarrao, deputy director of Science, Technology & Engineering, welcomed the crowd and honored the achievements of the ARIES team.

Stacy McLaughlin, Actinide Material Processing & Power (AMPP) division leader, read the names of those who were instrumental in the work while employees came forward to receive plaques, certificates and coins.

"The ARIES team provides the nation's only expertise and capability to dissemble nuclear weapons pits and convert that metal into an oxide form — a critical step in the disposition of surplus plutonium," DNN's Kasia Mendelsohn continued. "It's your expertise and, more importantly, your dedication to this work that's brought us to this milestone, and allows NNSA to fulfill the United States' international commitments." About 20 LANL retirees returned to the Lab to celebrate the work they'd done in the past, joining current employees at the event, some of whom now work in other programs at the Lab.

As employees shared stories of their experience with ARIES over the years, the celebration began to feel more like a family reunion than a workplace event.

"What I'm taking away from this, and what you seem to be most taking away from this, is the community and the family that you have built, and that is truly special," Mendelsohn noted. "That's something you will carry with you forever."

Some who have served on the team even have true family ties, such as father and son Ernie Montoya and Willie Montoya, and father and daughter Charles Richardson and Stacy McLaughlin.

"When the word 'ARIES' is said, many people think of plutonium oxide," Willie Montoya, ARIES manufacturing manager, said from the NSSB stage. "But when I hear the word 'ARIES', I think of all of you."

WELCOME NEW DEPUTY DIVISION LEADER SETH JOHNSON

Over the past fifteen years, Seth Johnson has had the unique opportunity of fulfilling many challenging roles at Los Alamos National Laboratory. The majority of his time and energy has been spent at TA-55, working directly with programs, operations, and engineering to understand and analyze the facility's systems, document its processes and work to ensure flexibility of operations while meeting regulatory requirements. He has also worked with numerous customers associated with LANL's nuclear facilities to plan and execute projects, ensuring realistic and achievable milestones are created and met. Seth has a Civil Engineering Degree from New Mexico State, a Master's Degree in Project Management from Pennsylvania State University. AMPP is happy to welcome him as Deputy Division Leader, effective March 16, 2020.